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## Motivation, work-stress and somatic symptoms of Romanian preschool and primary school teachers

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### Abstract

**Problem Statement** Pursuing high performances in student's competitions is an extracurricular activity that generates stress and the intensity of this stress is positively and high correlated with the frequency of somatic symptoms generated by stress.

**Purpose and objectives of the study** This study was focused on the stress which generated somatic symptoms at Romanian teachers from kindergarten and primary schools, studying its connection with the stress generated by one of the extracurricular activities. There were compared two types of motivations for work and their effect on the relation between stress and somatic symptoms. **Methodology** Data were collected from a total number of 1169 teachers from Romania, Iasi County, aged from 19 to 60 (M=42): 501 teachers were from kindergarten and 668 from the primary school. Somatic complaints, stress related to curricular and extracurricular activities, and intrinsic-extrinsic motivations are measured with Likert 6 point scales. **Findings and conclusion** Intrinsic-extrinsic motivation, stress related to extracurricular activities and somatic complaints are evaluated. The associations between the stress generated by the imposed extracurricular activities and somatic complaints (a) headaches, (b) inability to concentrate, (c) colds, (d) sore throats, and (e) dizziness are described. As expected, their relations are stronger when the motivation for the extracurricular activities is extrinsic then when these are intrinsic. As main result there was found that the frequency of somatic symptoms was significantly and positively correlated with teacher's stress generated by pursuing high performance in children's competitions.

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### 1. Introduction

Over the past 10 years in Romania, in the education process it can be seen that the institutional and individual assessment procedures have been amplified. Teachers from kindergarten and primary school are evaluated annually on a set of performance criteria, operationalized in the categories of activities. More and more voices within the educational system indicates that the criteria and evaluation activities valued in the assessment sheets of the kindergarten and primary school teachers are encouraged especially the extracurricular activities and the competitions. Our previous research showed that in Romania, teachers from kindergarten and primary school have more requests than in other European countries to carry out activities other than those it is to make curricula (Masari et. al, 2010, Muntele Hendres et al., 2010). Also, an analysis of assessment records to obtain salary supplements by teachers from kindergarten and primary school showed that roles such as organizing competitions among pupils, assessor of the results in the pupils competitions, and teacher who trained a prize-winning pupil in competitions are

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more valued in relation to those roles that are defined by other activities such as design and efficient implementation of the curriculum, monitoring and advancing with all students in class, not just with two or three 'peaks', professional development (Curelaru et al., 2010). Given the requirements of the assessment sheets, children's involvement in the competition has intensified in recent years. But this category of activities, considered by 80% of Romanian specialists in education sciences as an extracurricular activities, and investigated in a previous study (Masari et al., 2010), has harmful effects on young age (Donzella et al., 2000; Gilbert et al., 2009). The negative effects of competition on children are exercised either directly by requiring some adaptability that still inaccessible for the psyche from 3-11 years, and indirectly through over request of teachers, increasing their stress, decreasing their intrinsic motivation for work, and appearance of somatic symptoms.

### *Teachers' occupational stress*

Evidence relating stress with illness has emerged from a variety of experimental, clinical and epidemiological research strategies which resulted in a vast literature (Stephoe, 1991). Since the early research on occupational stress, the teaching profession has been identified as one of the most stressful early in research on occupational stress. In many teachers have been identified neurotic symptoms similar to those of war veterans (Bloch, 1978), and studies have shown that stress may be one of the major health issues facing this professional category (Gold & Roth, 2003). The specialists say that what is affecting the intellectual, emotional and physical welfare of teachers, certainly it has effects on the quality of teaching process and child development. The central factor in determining the teachers stress is represented by too many demands and responsibilities assigned to them, and especially by their ambiguity on the professional role. For example, the program loaded with too many tasks, especially extracurricular activities are a significant source of stress, and hence a source of health deterioration (Shirom, Oliver & Stein, 2009).

### *Work motivation of teachers*

Teacher motivation for their work is determined by intrinsic factors (needs, attitudes, values individual), and extrinsic (organizational salary, performance standards, and institutional criteria). Studies related to theory of self-determination (Ryan & Deci, 2000) showed that there is a dependency between two categories of motivational factors, the development of intrinsic motivation being a consequence of the interiorization of external adjustments that meet the individual's fundamental needs: autonomy, competence, relationships. The performance and satisfaction in professional role depend on the extent to which the employee has the opportunity to develop autonomy and competence (Sheldon et al., 1997). However, these results do not lead to that factors such as extrinsic motivation necessarily lead to dissatisfaction, although the highest degree of satisfaction is determined by intrinsic motivation. Regarding the work motivation, we can have a positive correlation between extrinsic and intrinsic motivation if the external incentives are perceived as controlling factors or a positive correlation when external incentives are perceived as support for autonomy, accountability, professional development (Osterloh, Frost, & Frey, 2002).

In this study, we intend to identify to what extent the stress generated by professional activities of Romanian teachers from kindergarten and primary school is associated with somatic symptoms and to what extent intrinsic motivation has protective effects against stress for this occupational category.

## **2. Methodology**

Data were collected from a total number of 1169 teachers from Romania, Iași County, aged from 19 to 60 ( $M=42$ ): 501 teachers were from kindergarten and 668 from the primary school.

Somatic complaints, stress related to curricular and extracurricular activities, and intrinsic-extrinsic motivations are measured with Likert 6 point scales.

1. The frequency of somatic symptoms: a) headaches, b) inability to concentrate, c) colds, d) sore throats, and e) dizziness – Alpha=0,82.
2. Teacher's stress generated by pursuing high performances in children's competitions (3 items, Alpha=0,71): 1. to prepare the pupils for competitions outside the school hours; 2. to prepare the pupils for competitions during the school hours; 3. to participate with pupils in competitions.

3. The stress generated by activities aimed to tracking individual progress (3 items, Alpha lui Cronbach=0,82): to help a child with poor results to progress, always to follow the acquisitions progress of children, and to pay attention to each child equally.
4. Teacher's extrinsic and respectively intrinsic motivation for the professional activities. Each type of motivation was evaluated by a single question: „I am motivated by the opportunities to implement in class the educational objectives that I highly value” and respectively „I am motivated by the chance to apply for gaining the merit gradation payment”. The difference between intrinsic and extrinsic professional motivations have been transformed in a categorical variable with 2 values (1 extrinsic motivated, 2 intrinsic motivated) using the elimination of those values within the average  $\pm$  SD.

Regarding the data analysis, our investigation is based on a correlation design and t-test.

### 3. Results

Perceived stress in those activities for tracking the progress of each child was significantly lower compared with the one for getting high performance through competition:  $t=9,75$ ;  $p<0,001$  ( $N=939$ ).

Intrinsic motivation for professional work was significantly higher than extrinsic motivation:  $t=11,602$ ;  $p<0,001$  ( $N=1090$ ).

The frequency of somatic symptoms was significantly and positively associated with perceived stress levels, both for competition:  $r=0,25$ ;  $p<0,001$  ( $N=900$ ), and for tracking the individual progress:  $r=0,30$ ;  $p<0,001$  ( $N=1092$ ).

When comparing the level of perceived stress in both types of activities (targeted to individual progress of each child, and to competition) within the groups to which were measured high values for only one type of motivation, we see that those with intrinsic motivation have the lowest stress if they develop activities focused on tracking the individual progress of each child, and also they have the highest score for stress if they have to deal with competition between children.

To those teachers which motivation for the profession is mainly extrinsic do not feel different stress levels in the two types of activities:  $t=5,51$   $p<0,001$  ( $N=136$ ).

To those teachers with predominantly extrinsic motivation, the stress generated by activities focused on competition is significantly associated with frequency of somatic symptoms,  $r=0,24$   $p<0,001$  ( $N=73$ ), while for those with intrinsic motivation, there is no significant correlation between stress and symptoms,  $r=0,04$   $p=0,70$  ( $N=63$ ).

### 4. Discussions and conclusion

As expected, the use of competition among children ages so small can not be lived comfortably by those who initiate and organize such inadequate activities, evidenced by significantly higher scores on the stress induced by such activities, compared to that one generated by tracking the progress of each child. Also, the study confirms the relation of association between somatic symptoms caused by stress and perceived stress levels.

In general, intrinsic motivation of teachers is much stronger than the one for earnings.

The role of intrinsic motivation is more discernible when from the investigated group there are removed only those who are very strongly oriented toward an intrinsic professional motivation, or conversely, those who are very much motivated to get extra salary.

In this case, it can be observed the lowest values of stress for those teachers with intrinsic motivation especially when they have to develop specific activities that follow the progress of the child, and also the biggest score of stress can be seen to the same group when they have to use the competition between children.

The association between somatic symptoms and perceived stress is stronger to those with extrinsic motivation than to those who especially follow to respect those values that they think along the education process. This result is consistent both with other results showing that well-being depends on the extent to which people develop activities in accordance with their real interests and goals (Sheldon et al., 1997), and they do not live a conflict between what they know that it is desirable what to do and what they are doing.

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